AMENDMENTS TO THE CLAIMS

1.–25. (Cancelled)

26. (Currently amended) A method for aiding in the determination of whether–a mammal is susceptible to or at risk of a disease associated with β-amyloid formation and/or aggregation, said method comprising:

(a) determining, in a first sample obtained from said mammal, the ~~total~~ amount of a N-terminal truncated and/or post-translationally modified β-amyloid 42 variant;

(b) comparing the amount of β-amyloid variant determined in step (a) with the amount of said variant typically present in control samples obtained from one or more patients known to suffer, or known not to suffer, from ~~a particular~~ said disease associated with β-amyloid formation and/or aggregation;

(c) concluding, from the comparison in step (b), whether the mammal is susceptible to or at risk of [[a]] said disease associated with β-amyloid formation and/or aggregation.

27.-33. (Cancelled)

34. (Withdrawn/Currently amended) The method of claim [[31]] 26 wherein said β-amyloid variant is selected from the group consisting of Aβ(2-42), Aβ(3-42), Aβ(4-42), Aβ(5-42), Aβ(6-42), Aβ(7-42), Aβ(8-42), Aβ(9-42) and Aβ(10-42).

35. (Withdrawn) The method of claim 26 wherein the post-translationally modified β-amyloid variant is modified by methylation or pyroglutamylation.

36. (Withdrawn) The method of claim 35 wherein the methylation is present at position 1, 2, 4, or 6 of an N-terminal truncated β-amyloid variant.

37. (Withdrawn) The method according to claim 35 further characterized in that the pyroglutamylation is present at position 3 of an N-terminal truncated β-amyloid variant starting at position 3 of β-amyloid.

38. (Cancelled)

39. (Cancelled)

40. (Previously presented) The method of claim 26 wherein at least one of the first and second samples is a brain extract sample or a body fluid sample.

41. (Previously presented) The method of claim 40 wherein the body fluid sample is a blood sample or a cerebrospinal fluid (CSF) sample.

42. (Previously presented) The method of claim 26 wherein the disease associated with β-amyloid formation and/or aggregation is Alzheimer's disease (AD).

43. (Withdrawn) The method of claim 26 wherein the susceptibility to Alzheimer's disease (AD) or the risk of developing AD is determined by detecting Aβ(5-42) or Aβ(8-42) in a body fluid sample obtained from the mammal.

44.-55. (Cancelled)

56. (Currently amended) The method of claim [[29]] 26 wherein said N-terminal truncated β-amyloid variant starts at position 4 of β-amyloid.

57. (Previously presented) The method of claim 56 wherein said β-amyloid variant is Aβ(4-42).

58. (Currently amended) The method of claim [[29]] 26 wherein the post-translationally modified β-amyloid variant is modified by methylation.

59. (Previously presented) The method of claim 58 wherein the methylation is present at position 4 of an N-terminal truncated β-amyloid variant.

60. (Currently amended) The method of claim [[29]] 26 wherein the susceptibility to Alzheimer's disease (AD) or the risk of developing AD is determined by detecting Aβ(5-42) in a body fluid sample obtained from the mammal.

61. (Previously presented) The method of claim 26 wherein the amount of N-terminal truncated and/or post-translationally modified β-amyloid variant is determined by 2-D electrophoresis or mass spectrometry or both.

62. (Cancelled)

63. (Currently amended) The method of claim [[29]] 26 wherein the amount of ~~one or more~~ the N-terminal truncated and/or post-translationally modified β-amyloid 42 ($A\beta_{42}$) variant[[s]] is detected using an antibody that binds an epitope at the N-terminus of said variant[[s]].